REMARKS

Claims 1-24 are pending. The Examiner's reconsideration of the rejection is respectfully requested in view of the remarks.

Applicant appreciates the Examiner's indication that Claims 4,5, 10, 11, 15, 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-3, 6-9, 12-16, 19, 23 and 24 have been rejected under 35 U.S.C. 102(a) as being anticipated by Peir et al. (US Patent App. No. 2002/0144063). The Examiner stated essentially that Peir teaches all the limitations of Claims 1-3, 6-9, 12-16, 19, 23 and 24.

Claims 1, 6, 13, 20, 23 and 24 are the independent claims.

Claim 1 claims, *inter alia*, "a prediction mechanism predicting that data requested by the first cache of a cache miss can be found in at least one of the one or more other caches." Claims 6 and 20 claim, *inter alia*, a "prediction mechanism predicting whether data requested by the first cache of a cache miss can be supplied by at least one of the one or more other caches." Claim 13 claims, *inter alia*, a "prediction mechanism predicting whether data requested by the first cache of a cache miss can be found in at least one of the one or more other caches." Claims 23 and 24 claim, *inter alia*, "predicting that data requested of the cache miss by the first cache can be supplied by one or more other caches."

Peir teaches a prediction mechanism for predicting a next requester for a number of data blocks that have been recently accessed (see Abstract). Peir does not teach "predicting that data

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requested of the cache miss by the first cache can be supplied by one or more other caches" as claimed in Claims 23 and 24, nor a prediction mechanism for the same, essentially as claimed in claims 1, 6, 13 and 20. The prediction mechanism Peir teaches prediction of a requester for data before a request is issued. Peir does not teach a prediction mechanism that predicts, when a cache miss occurs and a cache request is issued, whether the cache request can be serviced by another cache or the cache request must be serviced by the memory, essentially as claimed in claims 1, 6, 13, 20, 23 and 24. Indeed, Peir has no need for prediction of where data resides (whether the cache request can be serviced by another cache) as the home directory records states and locations of data blocks in the memory unit (see Abstract). Pier is concerned only with the prediction of a next requester in order to get information about the known information about the current owner of data to a predicted requestor. Thus, there is a fundamental difference between the claimed invention and Peir; that is, predicting a requester of a memory block before the request is issued as taught by Peir and predicting a cache having requested data after a cache miss, essentially as claimed in Claims 1, 6, 13, 20, 23 and 24. Accordingly, Peir fails to teach all the limitations of Claims 1, 6, 13, 20, 23 and 24.
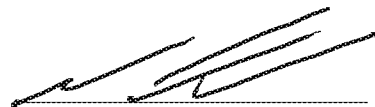
At least Claims 6 and 20 are believed to be allowable for additional reasons; Claims 6 and 20 claim, *inter alia*, a memory controller using a "prediction result to determine if the memory is to be accessed immediately, or if the memory is not to be accessed until a corresponding cache snoop operation shows that the data requested by the first cache cannot be supplied." Peir teaches a prediction mechanism in a directory-based cache coherent system that must use a home directory (see Abstract and Figure 3A). Peir's method is not for snoopy-based cache coherence, essentially as claimed in Claims 6 and 20.

Claims 2 and 3 depend from Claim 1. Claims 7-9 and 12 depend from Claim 6. Claims

14-16 and 19 depend from Claim 13. The dependent claims are believed to be allowable for at least the reasons given for the respective independent claims. The Examiner's reconsideration of the rejection is respectfully requested.

For the forgoing reasons, the present application, including claims 1-24, is believed to be in condition for allowance. The Examiner's early and favorable action is respectfully urged.

Respectfully submitted,

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